Remarks

Claims 2, 3, 5, 8, 11, 13-17, 19, 27, 28 and 35 have been amended with details set forth in Attachment I (Version with Markings to Show Changes Made). Claim 1 has been cancelled.

Election/Restriction

Applicants confirm the election of species made by telephone on 7/10/02. It is believed that Claim 13 also reads on the elected species.

Claim Objection

The objection to Claim 19 is overcome by the amendment thereto.

The 35 USC 112 Rejection

Claims 1, 35, 8, 9, 33, 12, 21 and 27 are rejected under 35 USC 112, second paragraph, as being indefinite. Certain of the objections have been overcome by amendments. However, the terms "different", "ribbon", and "openings" of Claims 9, 33, 12 and 21 are believed to be proper. Thus, this rejection is believed to be overcome.

The 35 USC 102 Rejection

Claims 1-6, 8-12, 15-16, 27-28, and 34-35 are rejected "under 35 USC 102 as being unpatentable over Phan et al". This rejection is confusing in that 102 requires "anticipation" and 103 only requires "obviousness". Which does the Examiner intend? In either case, the claims are now amended clearly patentably define over Phan et al which merely teaches SMP member within an SMA structural member, and clearly fails to teach or suggest the claimed features, particularly as now amended. Thus, this rejection should be withdrawn.

The 35 USC 103 Rejections

Claims 14 and 17-22 are rejected under 35 USC 103(a) as unpatentable over Phan et al in view of Maynard, and Claims 32-33 under 35 USC 103(a) as unpatentable over Phan et al in view of Lee et al. Claim 14 depends from Claim 2, and Claims 17-22 depend from Claim 16. Maynard fails to teach or suggest the "strips" of Claim 14 and 17-22, and Lee et al fails to teach on the series connection of Claims 32 and the "different" configuration of Claim 33. Thus, each of these rejections are believed to be overcome by the amendment to the claims.

Conclusion

In view of the amendments to the claims, each objection and rejection are believed to be overcome. Thus, with certain of the allowed claims being generic, examination of the non-elected species claims is deemed to be in order.

Respectfully submitted,

Dated: 9-10-02

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Enclosure:
Attachment I

Attachment I
S. N. 09/819,111
Version with Markings to Show Changes Made

In The Claims:

Claim 1, cancel.

Claims 2, 3, 5, 8, 11, 13-17, 19, 27, 28, and 35, amend to read as follows:

2. (Amended) In a device for minimally invasive application, the improvement comprising: a structure for at least positioning and bending a distal end of the device, said structure including a quantity of shape memory alloy and a quantity of shape memory polymer[.],

[The improvement of Claim 1, wherein] said shape memory alloy [has] having a longitudinally extending coiled configuration with more than one wrap, and wherein said shape memory polymer has a cylindrical configuration.

3. (Amended) The improvement of Claim 2, wherein said shape memory alloy is embedded within [in] said shape memory polymer.

5. (Amended) The improvement of Claim 2, wherein said coil configuration is longitudinally compressed and retained in said shape memory polymer so as to define a hollow tube having said coil configuration embedded in a wall surface thereof.

8. (Amended) The improvement of Claim 2, including a plurality of [units] structures each having a longitudinally extending coiled configuration of shape memory alloy located within a cylindrical configuration of shape memory polymer.

11. (Amended) In a device for minimally invasive applications, the improvement comprising: a structure for at least positioning and bending a distal end of the device, said structure including a quantity of shape memory alloy and a quantity of shape memory polymer[.],

[The improvement of Claim 1, wherein] said quantity of shape memory polymer is in a tubular configuration, and wherein said quantity of shape memory alloy is wrapped around at least a portion of the tubular configuration.

13. (Amended) The improvement of Claim 2[1], wherein said quantity of shape memory alloy is composed of NiTiCu.

14. (Amended) The improvement of Claim 2[1], wherein said quantity of shape memory alloy is composed of a plurality of shape memory alloy strips.

15. (Amended) The improvement of Claim 2[1], wherein said quantity of shape memory polymer has a closed tubular configuration.

16. (Amended) The improvement of Claim 15, wherein said quantity of shape memory alloy has a closed tubular configuration located within said tubular configuration of shape memory polymer.

17. (Amended) The improvement of Claim 15, wherein said quantity of shape memory alloy is composed of a plurality of strips, and wherein said strips are located in a wall surface of said tubular configuration of shape polymer.

19. (Amended) The improvement of Claim 17[19], wherein said plurality of strips are in a spaced longitudinal relationship.

27. (Amended) The improvement of Claim 26[16], wherein said plurality of ribbons are of mesh configuration and mounted to a said tubular configuration as support members.

28. (Amended) The improvement of Claim 2[1], wherein said quantity of shape memory alloy has a mesh, tubular configuration, wherein said quantity of shape memory polymer has a closed tubular configuration, and wherein said mesh, tubular configuration is embedded in said tubular configuration.

35. (Amended) A [bistable] device for reversible fine positioning of an object, comprising:

a member constructed of shape memory polymer, at least one member constructed of shape memory alloy located in or adjacent to said member constructed of shape memory polymer, and means for selectively heating said members to cause a change in configuration thereof, whereby the change in configuration results in reversible positioning thereof.